

CLAIMS

What is claimed is:

1. A combination mobile terminal and camera comprising:

a housing having a first light aperture formed in a first side of said housing and a second light aperture formed in a second side of said housing;

a wireless transceiver disposed within said housing for transmitting and receiving signals;

an image sensor disposed within said housing for converting images formed by light on said image sensor into electrical signals;

an optical system for selectively directing light passing through said first and second light apertures onto said image sensor; and

an image processor coupled to an output of said image sensor for processing electrical signals from said image sensor to produce image signals.

2. The combination mobile terminal and camera of claim 1 wherein said optical system comprises a mirror assembly having at least one movable mirror, said mirror assembly being movable between a first position to direct light entering through said first light aperture along a first image path onto said image sensor and a second position to direct light entering through said second light aperture along a second image path onto said image sensor.

3. The combination mobile terminal and camera of claim 2 wherein said mirror assembly comprises at least one movable mirror rotatable between at least first and second positions.

4. The combination mobile terminal and camera of claim 3 wherein said movable mirror directs light entering through said first light aperture along a first image path onto said image sensor when disposed in a first position and directs light entering through said second light aperture along said second image path onto said image sensor when disposed in a second position.

5. The combination mobile terminal and camera of claim 2 wherein said mirror assembly comprises at least first and second movable mirrors.

10 6. The combination mobile terminal and camera of claim 5 wherein said first and second movable mirrors slide between a first position and a second position.

15 7. The combination mobile terminal and camera of claim 5 wherein said first movable mirror directs light entering through said first light aperture along said first image path onto said image sensor when said first and second movable mirrors are disposed in said first position and wherein said second movable mirror directs light entering through said second light aperture along said second image path onto said image sensor when said first and second movable mirrors are disposed in said second position.

20 8. The combination mobile terminal and camera of claim 2 further comprising a position detector to detect the position of said mirror assembly, said image processor being responsive to a signal from said position detector to invert said image when said mirror assembly is in one of said first and second positions.

9. The combination mobile terminal and camera of claim 1 wherein said optical system further comprises at least one lens.

10. The combination mobile terminal and camera of claim 9 wherein said lens is movable
5 between a first position along said first image path to a second position along said second image path.

11. The combination mobile terminal and camera of claim 10 further comprising a movable mirror assembly having at least one movable mirror, said mirror assembly being movable
10 between a first position to direct light entering through said first light aperture along a first image path onto said image sensor and a second position to direct light entering through said second light aperture along a second image path onto said image sensor.

12. The combination mobile terminal and camera of claim 9 comprising a first lens disposed
5 along said first image path and a second lens disposed along said second image path.

13. The combination mobile terminal and camera of claim 12 wherein said first and second lenses are fixed.

20 14. The combination mobile terminal and camera of claim 1 further comprising a display.

15. The combination mobile terminal and camera of claim 10 wherein said first aperture faces in the direction of said display and said second aperture faces in the direction opposite said display.

16. A camera comprising:

a housing;

a display mounted in said housing;

a first light aperture formed in a first side of said housing and facing in the direction of
said display;

a second light aperture formed in a second side of said housing and facing in a direction
opposite said display;

an image sensor disposed within said housing for converting images formed by light on
said image sensor into electrical signals;

an optical system for selectively directing light passing through said first and second light
apertures onto said image sensor; and

an image processor coupled to an output of said image sensor for processing electrical
signals from said image sensor to produce image signals.

17. The camera of claim 16 wherein said optical system comprises a mirror assembly having
at least one movable mirror, said mirror assembly being movable between a first position to
direct light entering through said first light aperture along a first image path onto said image
sensor and a second position to direct light entering through said second light aperture along a
second image path onto said image sensor.

18. The camera of claim 17 wherein said mirror assembly comprises at least one movable
mirror rotatable between at least first and second positions.

19. The camera of claim 18 wherein said movable mirror directs light entering through said
first light aperture along a first image path onto said image sensor when disposed in said first

position and directs light entering through said second light aperture along said second image path onto said image sensor when disposed in said second position.

5 20. The camera of claim 17 wherein said mirror assembly comprises at least first and second movable mirrors.

21. The camera of claim 20 wherein said first and second movable mirrors slide between a first position and a second position.

10 22. The camera of claim 20 wherein said first movable mirror directs light entering through said first light aperture along said first image path onto said image sensor when said first and second movable mirrors are disposed in said first position and wherein said second movable mirror directs light entering through said second light aperture along a second image path onto said image sensor when said first and second movable mirrors are disposed in said second position.

15 23. The camera of claim 22 further comprising a position detector to detect the position of said mirror assembly, said image processor being responsive to a signal from said position detector to invert said image when said mirror assembly is in one of said first and second positions.

20 24. The camera of claim 16 wherein said optical system further comprises at least one lens.

25 25. The camera of claim 24 wherein said lens is movable between a first position along said first image path to a second position along said second image path.

26. The camera of claim 25 further comprising a movable mirror assembly having at least one movable mirror, said mirror assembly being movable between a first position to direct light entering through said first light aperture along a first image path onto said image sensor and a second position to direct light entering through said second light aperture along a second image path onto said image sensor.

27. The camera of claim 24 comprising a first lens disposed along said first image path and a second lens disposed along said second image path.

28. The camera of claim 27 wherein said first and second lenses are fixed.

29. A method for selectively displaying images seen through first and second apertures of a camera facing in opposing directions, said method comprising:

providing an movable mirror assembly for selectively directing light entering through said first and second apertures onto an image sensor to capture an image;
positioning said mirror assembly in a first position to direct light entering through said first light aperture along a first image path to capture an image seen through said first light aperture; and
positioning said mirror assembly in a second position to direct light entering through said second light aperture along a second image path to capture an image seen through said second light aperture.

30. The method of claim 27 wherein said mirror assembly comprises a movable mirror and wherein positioning said mirror assembly in said first and second positions comprises moving said mirror between said first and second positions.

5 31. The method of claim 28 wherein said movable mirror is rotatable and wherein moving said movable mirror between said first and second positions comprises rotating said movable mirror between said first and second positions.

10 32. The method of claim 28 wherein moving said movable mirror between said first and second positions comprises sliding said movable mirror between said first and second position.

15 33. A method of directing multiple images through multiple apertures onto an image sensor comprising:

15 recording a first image by directing the image through a first aperture onto a mirror assembly;

reflecting the first image from the mirror assembly and directing the reflected first image onto the image sensor;

20 recording a second image by directing the second image through a second aperture onto the mirror assembly; and

reflecting the second image from the mirror assembly and directing the reflected second image onto the image sensor.

25 34. The method of claim 33 wherein the mirror assembly includes a single mirror, and wherein the first and second images are reflected from the single mirror onto the image sensor.

35. The method of claim 34 wherein the single mirror is movable between first and second positions, and wherein in the first position said single mirror aligns with said first aperture, and wherein in said second position said single mirror aligns with said second aperture.

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36. The method of claim 35 wherein said single mirror is rotatable between said first and second positions.

37. The method of claim 33 wherein said mirror assembly includes first and second mirrors movable between first and second positions, and wherein in said first position said first mirror aligns with said first aperture, and wherein in said second position said second mirror aligns with said second aperture.

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